

2. (Amended) A method for preventing or treating an amyloid-related disease in a subject, comprising: administering to the subject an antigenic amount of an all-D peptide, wherein said all-D peptide interacts with an amyloid protein, elicits the production of antibodies against said all-D peptide, and induces an immune response by said subject, thereby preventing or reducing amyloid-induced cellular toxicity or amyloid fibril formation.
3. (Amended) The method of claim 1, wherein said all-D peptide comprises a peptide of at least one region of an amyloid fibril or an amyloid protein, said region being selected from the group consisting of: A β (1-42), C-terminal region, β sheet region, GAG-binding site region, cellular adherence region, immunogenic fragments thereof, protein conjugates thereof, immunogenic derivative peptides thereof, immunogenic peptides thereof, and immunogenic peptidomimetics thereof.
4. (Amended) The method of claim 3, wherein said all-D peptide further comprises:
- (a) an N-terminal substituent selected from the group consisting of:
- hydrogen;
 - lower alkyl group consisting of acyclic or cyclic having 1 to 8 carbon atoms;
 - aromatic group;
 - heterocyclic group; and
 - acyl group; and

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(b) a C-terminal substituent selected from the group consisting of hydroxy, alkoxy, aryloxy, unsubstituted and substituted amino groups.

6. (Amended) The method of claim 4, wherein said all-D peptide further comprises an acid functional group, or a pharmaceutically acceptable salt or ester form thereof.

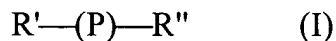
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7. (Amended) The method of claim 4, wherein said all-D peptide further comprises a base functional group, or a pharmaceutically acceptable salt form thereof.

8. (Amended) The method of claim 3, wherein said all-D peptide comprises SEQ ID NO:15.

12. (Amended) A method for preventing or treating an amyloid-related disease in a subject, comprising:

administering to the subject an antigenic amount of a peptide having Formula I:



wherein

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P is an all-D peptide of an amyloid fibril or an amyloid protein selected from the group consisting of: A β (1-42), C-terminal region, β sheet region, GAG-binding site region, cellular adherence region, immunogenic fragments thereof, protein conjugates thereof, immunogenic derivative peptides thereof, immunogenic peptides thereof, and immunogenic peptidomimetics thereof;

R' is an N-terminal substituent selected from the group consisting of:

hydrogen;


lower alkyl group consisting of acyclic or cyclic having 1 to 8 carbon atoms;

aromatic group;

heterocyclic group; and

acyl group; and

R" is a C-terminal substituent selected from the group consisting of hydroxy group, alkoxy group, aryloxy group, unsubstituted group, and substituted amino group.

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13. (Amended) The method of claim 12, wherein said all-D peptide elicits the production of antibodies against said all-D peptide, and induces an immune response by said subject, thereby preventing or reducing amyloid-induced neurodegeneration or amyloid fibril formation.
14. (Amended) The method of claim 12, wherein said alkyl or aromatic group is further substituted with a group selected from the group consisting of halide, hydroxyl, alkoxyl, aryloxy, hydroxycarbonyl, alkoxycarbonyl, aryloxy carbonyl, carbamyl, unsubstituted amino, substituted amino, sulfo, alkyloxysulfonyl, phosphono and alkoxyphosphonyl groups.
15. (Amended) The method of claim 12, wherein said all-D peptide further comprises an acid functional group, or a pharmaceutically acceptable salt or ester form thereof.

16. (Amended) The method of claim 12, wherein said all-D peptide further comprises a base functional group, or pharmaceutically acceptable salt form thereof.

17. (Amended) The method of claim 12, wherein said all-D peptide comprises SEQ ID NO:15.
